Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative Effects of Strain Counterstain Verses Active Release Technique on Nursing Staff of Gujranwala with Plantar Fasciitis: a randomized controlled trial

Protocol summary

Study aim

To compare the effectiveness of Strain Counterstrain (SCS) versus Active Release Technique (ART), each combined with standard physical therapy, on pain, functional ability (FAAM), and ankle range of motion in nursing staff with plantar fasciitis.

Design

A two-arm, multi-center, parallel-group, double-blind, randomized clinical trial with 112 planned participants. Individuals were randomly allocated in a 1:1 ratio using a computerized sequence via the Random.org online randomizer, with allocation concealment to maintain participant-level blinding.

Settings and conduct

This multi-centered trial was conducted at Chatha Hospital Gujranwala, District Headquarters Hospital Gujranwala, Cheema Heart Complex, and Chaudhary Hospital Gujranwala, Pakistan

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Nursing staff aged 25–60 years with plantar heel pain >4 weeks and tenderness over the plantar medial calcaneal tubercle. Exclusion Criteria: Other foot/ankle disorders, lower limb injury, malignancy, foot deformity or surgery, leg length discrepancy, ankle effusion, prior heel corticosteroid injection, or use of a walking aid.

Intervention groups

Group A (SCS): Received a 12-minute standard physical therapy program (ankle ROM, stretching, and intrinsic muscle strengthening) followed by Strain Counterstrain applied to six plantar fascia–related tender points (90 seconds × 5 repetitions, 30-second rest), 3 sessions/week for 6 weeks. Group B (ART): Received the same standard physical therapy program followed by Active Release Technique applied to the same six tender points (5 repetitions, 30-second rest), 3 sessions/week for 6 weeks.

Main outcome variables

(i) Primary Outcomes: Pain intensity (NPRS) and functional ability (FAAM). (ii) Secondary Outcomes: Ankle range of motion (dorsiflexion, plantarflexion, inversion, and eversion) measured using a universal goniometer.

General information

Reason for update

Acronym

SCART-PF Trial (Strain Counterstrain vs Active Release Technique for Plantar Fasciitis)

IRCT registration information

IRCT registration number: **IRCT20260529069564N4**
Registration date: **2026-08-20, 1405/05/29**
Registration timing: **retrospective**

Last update: **2026-08-20, 1405/05/29**
Update count: **0**

Registration date

2026-08-20, 1405/05/29

Registrant information

Name

Sajjan Iqbal Memon

Name of organization / entity

Chiniot General Hospital, Korangi

Country

Pakistan

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sajjan.memon@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2026-02-18, 1404/11/29

Expected recruitment end date

2026-05-30, 1405/03/09

Actual recruitment start date

2026-02-18, 1404/11/29

Actual recruitment end date

2026-05-30, 1405/03/09

Trial completion date

2026-05-30, 1405/03/09

Scientific title

Comparative Effects of Strain Counterstain Verses Active Release Technique on Nursing Staff of Gujranwala with Plantar Fasciitis: a randomized controlled trial

Public title

Comparison of Strain Counterstain and Active Release Technique for Treating Plantar Fasciitis in Nursing Staff of Gujranwala: A Randomized Controlled Trial

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Demographics: Male and female hospital nursing staff aged 25 to 60 years. Clinical Presentation: Unilateral or bilateral pain and tenderness on the sole of the foot under the heel, sometimes extending into the arch, present for more than 4 weeks. Symptom Pattern: Reported pain with the first step after prolonged immobilization or the first step out of bed in the morning. Palpation Finding: Pain elicited on palpation of the medial calcaneal tubercle, persisting for longer than 4 weeks.

Exclusion criteria:

Co-existing Pathology: Achilles tendinopathy, tarsal tunnel syndrome, or any other foot/ankle pathology. Systemic/Structural History: History of malignancy, lower-limb injury, or atrophy of the heel fat pad. Structural Abnormality: Leg length discrepancy, club foot deformity, or effusion around the ankle joint. Surgical History: Recent surgical history of the foot or leg. Prior Treatment: Any previous history of corticosteroid injection in the heel, or current use of an assistive device for walking.

Age

From **25 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size

Target sample size: **112**

Actual sample size reached: **108**

Randomization (investigator's opinion)

Randomized

Randomization description

Method of Randomization: Simple randomization was used to allocate participants in a fixed 1:1 ratio, giving each participant an equal probability of assignment to either treatment arm. Unit of Randomization: The individual participant (nursing staff formally diagnosed with plantar fasciitis). Cluster or group-based randomization was not used. Randomization Strata: Not applicable — no pre-enrollment stratification (e.g., by gender or age band) was performed. Tools Used in Randomization: The online tool available at random.org/lists/ was used to generate the allocation sequence by specifying the total number of participants, participants per group, and group numbers, with unique identification numbers generated for each participant. How the Random Sequence was Built: The electronically generated sequence dictated whether an enrolling individual entered Group A (Strain Counterstain) or Group B (Active Release Technique). Allocation Concealment: Yes. The generated allocation sequence was concealed from participants and from the assessors performing outcome measurements; only research team members handling enrollment logistics had access to the sequence.

Blinding (investigator's opinion)

Double blinded

Blinding description

Participants: Participants were blinded to group allocation and were not informed whether they were receiving Strain Counterstain or Active Release Technique. Outcome Assessors: Assessors recording NPRS, FAAM, and goniometric ROM at each time point were kept unaware of group allocation to minimize measurement bias. Treating Physiotherapists: Blinding of the treating physiotherapists was not feasible, as they were required to know the assigned technique in order to deliver the intervention correctly. Principal Investigators and Data Analysts: The principal investigators and statisticians responsible for data analysis had access to allocation information and were therefore not blinded.

Placebo

Not used

Assignment

Parallel

Other design features

Number of Groups (Arms): 2 groups. Allocation Ratio: 1:1. Sampling / Recruitment Technique: Non-probability convenience sampling. Study Setting: Multi-center hospital recruitment across Gujranwala (Chatha Hospital, District Headquarters Hospital, Cheema Heart Complex, and Chaudhary Hospital). Intervention Duration: 6 weeks total, 3 sessions per week, each session preceded by 12 minutes of standard physical therapy. Assessment Timepoints: Baseline, 2nd week, 4th week, 6th week, and an 8th-week follow-up assessment to evaluate retention of treatment effects.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethical Committee of Gujranwala Institute of Medical and Emerging Sciences (GIMES)
Street address
Main Campus: Ali Pur Chatha Road (near Gujranwala Medical College)
City
Gujranwala
Postal code
52250
Approval date
2026-02-18, 1404/11/29
Ethics committee reference number
Ref: GIMES/RA/26-00096

Health conditions studied

1

Description of health condition studied
Plantar fasciitis — a degenerative/inflammatory condition of the plantar fascia causing pain and tenderness under the heel, sometimes extending into the arch, commonly occurring in nursing staff due to prolonged standing, walking, and heavy occupational workload.
ICD-10 code
M72.2
ICD-10 code description
Plantar fascial fibromatosis

Primary outcomes

1

Description
Pain Intensity
Timepoint
Measured at Baseline (Week 0), Week 2, Week 4, Week 6, and Follow-up (Week 8).
Method of measurement
Numeric Pain Rating Scale (NPRS)

2

Description
Functional Ability of the Foot and Ankle
Timepoint
Measured at Baseline (Week 0), Week 2, Week 4, Week 6, and Follow-up (Week 8).
Method of measurement
Foot and Ankle Ability Measure (FAAM)

Secondary outcomes

1

Description
Ankle Range of Motion (dorsiflexion, plantarflexion, inversion, and eversion)
Timepoint
Measured at Baseline (Week 0), Week 2, Week 4, Week 6, and Follow-up (Week 8).
Method of measurement
Universal Goniometer

Intervention groups

1

Description
Intervention group:
Category
Treatment - Other

2

Description
Intervention group:
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Chatha Hospital, Gujranwala
Full name of responsible person
Dr. Mubeen Arshad
Street address
27/1 Hospital Road, Civil Line, Gujranwala
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Gujranwala
Postal code
52250
Phone
+92 341 3193628
Email
mubeenarshad1999@gmail.com
Web page address
https://www.facebook.com/ChatthaHospital/

2

Recruitment center
Name of recruitment center
District Headquarters Hospital, Gujranwala
Full name of responsible person
Medical Superintendent: Dr. Rana Imtiaz Ahmed Khan
Street address
Hospital Road, Civil Lines, Gujranwala,
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Postal code
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Phone
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Email
dhqhgwala@gmail.com
Web page address
https://punjab.gov.pk/node/867

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Gujranwala Institute of Medical and Emerging Sciences (GIMES)
Full name of responsible person
Dr. Hassan Fayyaz Butt
Street address
Ali Pur Chatha Road, Near Gujranwala Medical College, Gujranwala
City
Gujranwala
Postal code
52250
Phone
+92 321 1119104
Email
principal@gimes.com.pk
Web page address
https://gimes.com.pk
Grant name
Thesis Project
Grant code / Reference number
Ref: GIMES/RA/26-00096
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Gujranwala Institute of Medical and Emerging Sciences (GIMES)
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Gujranwala Institute of Medical and Emerging Sciences (GIMES)
Full name of responsible person
Dr. Mubeen Arshad
Position
Supervisor, Department of Physical Therapy
Latest degree
Bachelor
Other areas of specialty/work
Doctor of Physical Therapy (DPT)
Street address
Ali Pur Chatha Road, Near Gujranwala Medical College
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https://www.facebook.com/Gimes.Official.Grw/posts/%F0%9D%97%94%F0%9D%97%B1%F0%9D%97%BA%F0%9D%97%B6%F0%9D%98%80%F0%9D%98%80%F0%9D%97%B6%F0%9D%97%BC%F0%9D%97%BB%F0%9D%98%80-%F0%9D%97%AE%F0%9D%97%BF%F0%9D%97%B2-%F0%9D%97%A2%F0%9D%97%BD%F0%9D%97%B2%F0%9D%97%BBin-different-streams-of-allied-health-sciences%F0%9D%97%96%F0%9D%97%BC%F0%9D%97%BB%F0%9D%98%81%F0%9D%97%AE%F0%9D%97%B0%F0%9D%98%81%F0%9D%97%AA%F0%9D%97%B5%F0%9D%97%AE%F0%9D%98%81%F0%9D%98%80%F0%9D%97%94%F0%9D%97%BD%F0%9D%97%BD/122160187808497851/

Person responsible for scientific inquiries

Contact
Name of organization / entity
Gujranwala Institute of Medical and Emerging Sciences (GIMES)
Full name of responsible person
Dr. Hassan Fayyaz Butt
Position
Co-Supervisor; Registrar Administration
Latest degree
Bachelor
Other areas of specialty/work
Physiotherapy
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Email
gimespk@gmail.com
Web page address
https://www.facebook.com/p/Gujranwala-Institute-of-Medical-and-Emerging-Sciences-100063641604826/

Person responsible for updating data

Contact
Name of organization / entity
Gujranwala Institute of Medical and Emerging

Sciences (GIMES)

Full name of responsible person

Mehreen Iftikhar

Position

Doctor of Physical Therapy Student / Principal Investigator

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

Ali Pur Chatha Road, Near Gujranwala Medical College

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gimespk@gmail.com

Web page address

https://www.facebook.com/Gimes.Official.Grw/

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

The study will share a de-identified dataset containing demographic information (age, gender, BMI, affected side, symptom duration) and outcome measures (NPRS, FAAM, and ankle ROM for dorsiflexion, plantarflexion, inversion, and eversion) across all five assessment time points. The study protocol detailing methodology, interventions, and analysis procedures will also be available. Blank informed consent forms and assessment tools used in the study (NPRS, FAAM, goniometer recording sheet) will be shared upon request. Statistical analysis outputs (SPSS v27 outputs for the Mann-Whitney, Friedman, and post-hoc Wilcoxon analyses) may be provided for verification purposes. All shared data will be anonymized to protect participant confidentiality. Documents will be made available electronically upon reasonable request to the research team.

When the data will become available and for how long

The Individual Participant Data (IPD) dataset, Study Protocol, and Statistical Analysis Plan (SAP) will become available to qualified researchers beginning six months after the official publication of the final summary data results. This data will remain accessible for a period of up to three years from the initial start date of availability.

To whom data/document is available

The de-identified Individual Participant Data (IPD) and supporting clinical trial documents will be made available strictly to qualified academic researchers, physical therapy clinicians, and medical investigators affiliated with recognized academic institutions, universities, or healthcare organizations. Access will not be extended to commercial businesses, industry corporations, or entities seeking the data for commercial profit. All applicants must submit a methodologically sound research proposal demonstrating that the dataset will be utilized solely to achieve the scientific objectives specified in their approved study protocol.

Under which criteria data/document could be used

The de-identified Individual Participant Data (IPD) and clinical trial documents will be shared strictly for academic research, scientific verification, or secondary meta-analyses. Data will be securely transmitted electronically in spreadsheet formats once the applicant signs a formal Data Use Agreement prohibiting any participant re-identification. Requests will be evaluated by an internal Scientific Review Committee based on the methodological soundness and scientific validity of the proposed research protocol.

From where data/document is obtainable

The Individual Participant Data (IPD) dataset, clinical trial protocol, and Statistical Analysis Plan (SAP) are obtainable directly from the study's supervisory committee and principal investigators at the executing academic institution. The preferred mode of communication for data requests is via formal electronic mail. Contact Person / Supervisor: Dr. Mubeen Arshad and Dr. Hassan Fayyaz Butt Affiliated Department: Department of Physical Therapy Institutional Mailing Address: Gujranwala Institute of Medical and Emerging Sciences (GIMES), Ali Pur Chatha Road, Near Gujranwala Medical College, Gujranwala, Punjab, Pakistan Primary Email Address: principal@gimes.com.pk, Telephone / Contact Number: +92 321 1119104.

What processes are involved for a request to access data/document

Interested researchers should submit a written request describing the study objectives, methodology, and intended use of the data. Requests will be reviewed by the principal investigator and research team within approximately 2–4 weeks. Upon approval and completion of any required data-sharing agreement, the requested documents and de-identified dataset will be provided electronically.

Comments

No personally identifiable participant information will be shared. Data will be provided in accordance with ethical approval requirements, participant confidentiality protections, and applicable institutional policies.